

Date: Wednesday, 4/5/2006 3:24:08 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : CROSSTUBE EXTRUSION (412 AFT)
Job Number : 26548	
Estimate Number : 10030	
P.O. Number : N/A	Part Number : D6009129
This Issue : 4/5/2006 S.O. No. : N/A	Drawing Number : D6009 REV A
Prsht Rev. : NC	Project Number : N/A
First Issue : N/A Type : LANDING GEAR	Drawing Revision : A
Previous Run : 25942	Material : N/A
Written By : <u>SEE COMMENT BELOW</u>	Due Date : 7/20/2006 Qty: 25 Um: Each
Checked & Approved By : <u>06.04.06</u>	
Comment : Est Rev:A 01.08.17 New Issue SM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
----------------	------------------------------	----------------------

1.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O:

933

u

06.04.10

a) Order as per Dwg D6009

b) Material: 3.500 x 0.625 wall 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube

c) Minimum ultimate tensile strength = 77 ksi

d) Minimum tensile yield strength = 66 ksi

e) Tolerance are per ASTM B210 (see details on Dwg D6009)

f) Material certification required

2.0

D6009129P

Crosstube Material



Comment: Qty.: 1.0000 Each(s)/Unit Total : 25.0000 Each(s)

Crosstube Material

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure material certification is attached

AR 06/08/11

27

4.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D

M8

06/08/10

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: LD Date: 06/08/17
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/5/2006 3:24:08 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CROSSTUBE EXTRUSION (412 AFT)

Job Number: 26548

Part Number: D6009129

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



N/A

Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

MS

7.0

DC

DOCUMENT CONTROL



(27)

Comment: DOCUMENT CONTROL

Inspection Level 21

06/08/17

Job Completion



06/08/17

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

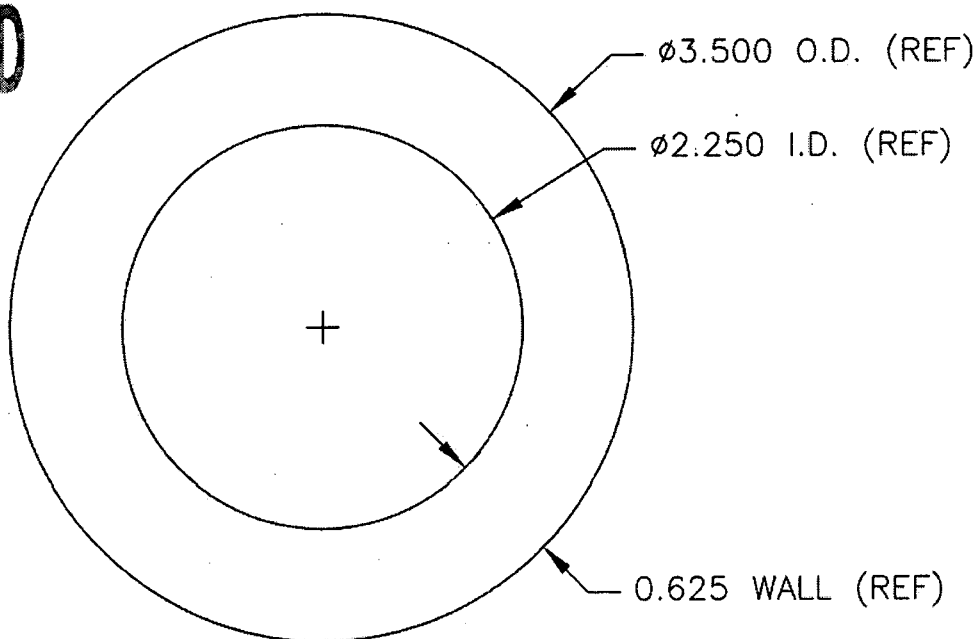
NOTE: Date & initial all entries



DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D6009	REV. A SHEET 1 OF 1
DATE 01.08.16	TITLE CROSSTUBE MATERIAL		SCALE 1:1
A	01.08.16	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
01.08.17 #



NOTES

- 1) D6009-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 129" LONG TUBE: D6009-129

- 2) MATERIAL: 3.500 OD x 0.625 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.008 MEAN (± 0.016 INCLUDING OVALITY)
WALL: ± 0.020 MEAN (± 0.063 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.188/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

SHOP COPY
225/9
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 26548

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



ALUnna

Aluminiumwerk Unna AG · Uelzener Weg 36 · D-59425 Unna

Dart Aerospace Ltd.
Main Finished Goods Location
1270 Aberdeen Street
CDN Hawkesbury, ONT, K6A1K7
Kanada

Aluminiumwerk Unna AG
Uelzener Weg 36 · D-59425 Unna
Postfach 11 46 · D-59401

fon +49 (0) 23 03-206 - 0
fax +49 (0) 23 03-206- 116

info@alu-unna.de
www.alu-unna.de

page: 1
date: 14.07.2006
customer 40980

delivery note

26269

your PO dated: 3.04.2006
your PO No.: PO 00000933
confirmation No.: 18609

contact: Petra Eisenblätter
Tel.: +(303) 755 5672
Fax: +(303) 755 5936
representative: CLAUS J. BETTER

CARRIER: Senator International S&A
Your VAT No.:
AWU VAT No.: DE177869055
Country of origin: Germany

We supply acc. to our delivery terms and conditions:

item	quantity	unit	net kgs
002	27,000	PC	

AWU article: 17956 / Tariff no. 76082091

Customer article: D6009-129 3.500 X 0.625 X 129

product: TUBES / seamless extruded / EN AW-7075 / round

condition: T 6511 / AMS-QQ-A-200/11

outer diameter: 3,500 INCH Tol.

+0,016 -0,016

inner diameter: 2,250 INCH

wall thickness: 0,625 INCH Tol.

+0,063 -0,063

fixed length 129,000 INCH Tol.

+0,188

test report acc. to EN 10204/3.1 / RM 531 / Rp0,2: 455

straightness 0,01 INCH / 1 FEET / RMS outer 25

tol. on quantity +10 % -10 %

3.500" OD 0.625" Wall, 129" lengths

Part Number D6009-129 crosstube

Surface Finish max. RMS 25

Tolerances per ASTM B210

Straightness 0.010" deviation /12" length

Outside surface: max. defects up to 0.005" (longitudinally)

Min. ultimate tensile strength 77 ksi

Min. yield strength 66 ksi

Commerzbank AG, Unna
Konto-Nr. 102 56 00 · BLZ 443 400 37
S.W.I.F.T. - Code: COBADE FF 443
IBAN: DE 90 4434 0037 01025600 00

Sitz der Gesellschaft: Unna
Amtsgericht Hamm, HRB 3045
Vorstand: Volker Findeisen (Vors.); Thomas Wiese
Vorsitzende des Aufsichtsrats: Irene Wiese

**delivery note****26269**

page: 2
date: 14.07.2006
customer: 40980

Tubes protected with corrosion protective oil

Tubes line marked

Packing list, Inspection certificate

Packing: seaworthy wooden cases

number of packages: 1

number of pieces: 27

Terms of payment: 30 days after date of delivery

terms of delivery: DDP (Delivered, Duty, Paid)

weight:	gross	1053,000	net	907,000
---------	-------	----------	-----	---------

Packstücke

customer address:

DART AEROSPACE LTD.

1270 Aberdeen Street

CDN K6A 1K7 HAWKESBURY

ON

Kanada

Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

Kunde: Dart Aerospace Ltd.
Client: 1270 Aberdeen Street
 K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 555/06
Cert No. / No. du certificat:
Bestellnummer: PO 00000933
Order No. / No. de commande
Auftrag: 18609/2
Our Reference/Notre Reference:

Produkt: Rohre nahtlos gepresst
Product / Produit: Tubes seamless extruded
Spezifikation: -; AMS - QQ - A - 200/11E; -; -;
Specification:

Werkstoff: 7075
Alloy/Alliage:

Zustand: T 6511
Temper/État

Abmessung 3,500 INCH x 2,250 INCH x 0,625 INCH x 129,000 INCH
Size / Dimension D6009-129 3.500 X 0.625 X 129

Kennzeichnung AlUnna - Cert No. 555/06 - 7075 T 6511 - Cast No. 01604347 - QQA 200/11E - 3.500" OD X 0.625" Wall - Heat No.
Marking/Marquage: 475/06 - Lot 18609/2-1 PO. 00000933

Lieferung pcs. lbs **Country of Manufacture: Germany**
Delivered Material / Matériel délivré: 27 1999

1. Chemische Analyse Chemical Analysis / analyse chimique

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Charge/ min.			1,2		2,1	0,18	5,1						
Cast No. max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
01604347	0,09	0,21	1,36	0,04	2,34	0,18	5,68	0,03	0,00	0,02			0,0000

Hydrogen content: <0,15 ccm/100 g Al

Elements without indication < 0,01 %

2. Mechanische Eigenschaften Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat No.
min. max.	77,0	66,0				
1	79,025	71,775	12,5		151	475/06 - 27 pcs.
2	79,460	72,210	11,0		161	

Ergebnis der Prüfungen:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

KroosD



Certified acc. to DIN EN ISO 9001:2000, valid until 2009-03-27
 Certificate No.: 001959 QM



ALUnna

Abnahmebeauftragter

07.07.2006

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany

Packinglist ALUnna AG

Customer PO	PO. 00000933
ALUnna ref. no.	18609/2
Date:	07.11.06

Boxmarking:

Dart Aerospace PO. 00000933 D 6009-129
Made in Germany
Dest. Hawkesbury Ont. Canada

We hereby declare that the wooden packing material are totally free from bark and apparently

free from live plant pests

[illegible]